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COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A Stronger European Industry for Growth and Economic Recovery

Industrial Policy Communication Update

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A Stronger European Industry for Growth and Economic Recovery

Industrial Policy Communication Update

I. THE PARTNERSHIP FOR A STRONGER EUROPEAN INDUSTRY

At a time when financial problems persist, Europe needs its real economy more than ever to underpin the recovery of economic growth and jobs. Our industry is well placed to assume this role: Europe is a world-leader in many strategic sectors such as automotive, aeronautics, engineering, space, chemicals and pharmaceuticals. Industry still accounts for 4/5 of Europe's exports and 80% of private sector R&D investment comes from manufacturing[1].

However, the continuing economic crisis has put Europe's industry under pressure: production is 10% lower than before the crisis and over 3 million industrial jobs have been lost. Consumer and business confidence are low. Problems in the banking sector make it difficult to access finance. Investments are held back and factories are under pressure to close.

This is happening at a time when the speed of innovation and technological development has put the world on the edge of an industrial break-through. Several new technology areas are converging to lay the foundation of the new industrial revolution based on green energy, clean transport, new production methods, novel materials and smart communication systems. These will change the global industrial landscape and our competitors in the U.S. and Asia are investing heavily in these areas. Europe needs new industrial investment at the time when lack of confidence, market uncertainty, financing problems and skills shortages are holding it back.

Europe needs to reverse the declining role of industry in Europe for the 21st century. This is the only way to deliver sustainable growth, create high-value jobs and solve the societal challenges that we face. To achieve this, a comprehensive vision is needed, focusing on investment and on innovation, but also mobilising all the levers available at EU level, notably the single market, trade policy, SME policy, competition policy, environmental and research policy in favour or European companies' competitiveness.

This Communication proposes a **partnership between the EU, its Member States and industry** to dramatically step up investment into new technologies and give Europe a competitive lead in the new industrial revolution. After an extensive public consultation, the Commission proposes to jointly focus investment and innovation on **six priority action lines**: advanced manufacturing technologies, key enabling technologies, bio-based products, sustainable industrial and construction policy and raw materials, clean vehicles, smart grids.

1 Industrial activities also have important spillover effects on production and employment in other sectors. For every 100 jobs created in industry, it is estimated that between 60 and 200 new jobs are created in the rest of the economy, depending on the industrial sector. See annexed Staff Working Document.

The Commission outlines the approach it will take in each of these areas through setting up specialised partnership task-forces. It shows how the EU will bring into play policy levers to support the reindustrialisation of Europe by mobilising all instruments at its disposal in an integrated way. Industry is expected to play its part by rolling out the necessary investments and products while Member States and regional authorities should adapt these priorities according to their national needs.[2] The joint action of industry and public authorities should also contribute to reduce competitiveness gaps across the Member States and EU regions.

Second, the actions proposed here aim to bring renewed dynamism in growth promising areas, namely the **Single Market** and **international markets**. It will not be possible to stimulate new investments if there are doubts about the ability to sell them or fear of unlawful appropriation of technological know-how. Substantial progress has already been made in unlocking the potential of internal and external markets through improved market access to companies. The Commission therefore concentrates on selected themes where significant scope for improvement still exists: reducing of costs, increasing confidence, fostering entrepreneurship and protecting intellectual property.

Third, the Commission addresses two areas weakened by the economic crisis and the fast-changing industrial landscape. Innovative investments are not possible without financing. The economic crisis and difficulties in the banking sector have had a negative impact on **lending to the real economy** and this Communication proposes a series of measures to remedy this situation. In addition, new technologies cannot be developed and brought to the market if the European work-force does not possess the **necessary skills**. The Commission therefore reinforces its strategy through a series of measures to equip Europeans for the future and facilitate industrial restructuring.

With the renewed industrial strategy outlined in this Communication, the Commission seeks to reverse the declining role of industry in Europe **from its current level of around 16%[3] of GDP to as much as 20% by 2020**. This should be driven by substantial recovery in investment levels (gross capital formation and investment in equipment), an expansion of the trade in goods in the Internal Market (to reach 25% of GDP in 2020) and a significant increase in the number of SMEs exporting to third countries.

II. THE POLICY AND ECONOMIC CONTEXT: A CENTRAL ROLE FOR INDUSTRY

This Communication builds on, and updates, the "Integrated Industrial Policy for the Globalisation Era"[4] adopted by the Commission in 2010 as part of the Europe 2020 Strategy. It focused on strengthening industrial competitiveness to support economic recovery and to enable the transition to a low-carbon and resource-efficient economy. The strategic approach proposed in 2010 remains fully valid for achieving our longer term objectives and very good progress has been made in its implementation.[5] However, the **harsh impact of the economic crisis** on several Member States, the subsequent economic stagnation in the EU and the

[2] See the Country-specific recommendations accompanying "Action for stability Growth and Jobs" COM(2012)299 of 30 May 2012.
[3] Manufacturing % of GDP at factor cost, 2011: Eurostat (nama_nace_10_c)
[4] COM(2010)614.
[5] See Staff Working Document SWD(2012) 297 for a detailed implementation report on these actions.

deteriorating outlook for the global economy **have given a new urgency to this Mid-term Review of the Industrial Policy**[6].

This year's Annual Growth Survey has underlined that growth-enhancing measures are needed to strengthen the recovery, to keep pace with our main competitors and to move towards the Europe 2020 objectives. A series of European Councils in 2011 and 2012 have called for action on areas addressed by this Communication, which was announced in President Barroso's State of the Union speech on 12th September 2012. This renewed industrial strategy is part of the response to these calls, in particular following the "Compact and Growth and Jobs" at the European Council of June 2012.

The political attention on industry is grounded in the realisation that **a strong industrial base is essential for a wealthy and economically successful Europe**. It is vital to stimulate economic recovery, provide high-quality jobs and reinforce our global competitiveness. Industry can generate the high productivity growth needed to restart sustainable growth: industrial productivity rose by 35% since the worst times of the crisis in 2009. Moreover, only industry can improve economy-wide energy- and resource-efficiency in the face of global resource scarcities and help provide solutions to societal challenges.

New investment is now urgently needed to stimulate economic recovery and bring innovation and new technologies back onto factory floors. If Europe does not keep up with investment in the adoption and diffusion of these technologies, its future competitiveness will be seriously compromised. However, the investment outlook is bleak.[7] Between 2008 and 2011, investment fell by 2.5 percentage points of GDP and current economic forecasts predict only a slow recovery. Revitalising investment requires business confidence, market demand, finance and skills, the four pillars of our policy.

Affordable and reliable access to energy and raw materials are becoming increasingly important as they account for a significant part of the cost in many industries. Energy prices for European industry went up by 27% in real terms between 2005 and early 2012, which is higher than in most of other industrialised countries, especially US. As regards electricity, European industry is on average facing higher prices than industries in other developed economies such as the US, Canada, Mexico and Korea, and this price gap has increased over the last decade[8]. The impact on the price of energy in Europe should be carefully considered when defining future energy policies. Effective implementation of a fully efficient internal market for energy, more investments in energy infrastructure, further diversification of energy sources as well as increased energy efficiency are the key elements in this respect.

Competition in manufacturing will in the future gradually decrease its dependence on wage differentials[9] thus **our industry has a good chance to restore the attractiveness of Europe**

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6 Accompanying this Communication, a working document reports on the implementation of the 2010 Communication and presents evidence in support of the policy actions included in this Communication. Further support is provided by the 2012 Competitiveness report and the "Report on Member State competitiveness Performance and Policies" based on Art. 173 TFEU. This Communication has benefitted from extensive discussions with the Member States, stakeholders and a public consultation. The ‘Mission Growth’ conference on industrial innovation, held on 29 May 2012 in Brussels, provided additional input.

7 See ECFIN Spring 2012 forecasts http://ec.europa.eu/economy_finance/publications/european_economy/2012/ee1upd_en.htm

8 International Energy Agency: Energy Prices and Taxes, Second Quarter 2012

9 See Boston Consulting Group: "US manufacturing nears the tipping point", March 2012.

as a location for production, provided it can capitalise on opportunities offered by new technologies and the size of the EU market**.**

III. THE PILLARS FOR A REINFORCED INDUSTRIAL POLICY: INVESTMENT IN INNOVATION, BETTER MARKET CONDITIONS, ACCESS TO CAPITAL AND HUMAN CAPITAL AND SKILLS

The Commission proposes a proactive approach to industrial policy based on the following four main elements.

1. First, the EU must provide the right framework conditions to **stimulate new investments**, speed up the adoption of new technologies and boost resource efficiency. These include technical regulations and Internal Market rules, as well as accompanying measures such as infrastructure and R&D/innovation projects. As a first step, **six priority areas** for immediate action are proposed in this Communication.

2. Secondly, urgent improvements in the functioning of the **Internal Market** are needed. They are presented here and in the Single Market Act II, and are reflected in the country-specific recommendations issued to Member States in the context of the European Semester. They will contribute to reinvigorate trade in the Internal Market. Opening up **international markets** will also speed up recovery. The fast-growing emerging economies of the world offer new export opportunities for EU firms, especially SMEs.

3. Investment and innovation are not possible without adequate **access to finance**. Public resources have already been mobilised to sustain investment in innovation, especially by SMEs. However, only unlocking private funds can ensure the level and sustainability needed to finance investment by EU companies. Improving access to capital markets is therefore another crucial challenge to increase our competitiveness.

4. Finally, accompanying measures to increase investment in **human capital and skills** are key to the success of industrial policy. Policies aimed at job creation and tools to anticipate skills needs are necessary to equip the labour force for industrial transformations.

This approach focuses on improving framework conditions that reinforce the growth potential of EU industry. It is fully mindful of the need to stimulate competition for an efficient allocation of resources and a dynamic economy. Public intervention should create the right market environment and come up with remedies to market failures. Industry must itself develop its competitive advantages and strengths. The objective of industrial policy is to foster competitiveness, but businesses themselves will always be ultimately responsible for determining their success or failure in the global market.

A. Facilitate investment in new technologies and innovation

R&D is by far the most important driver for company innovations. The Commission considers R&D policies as a priority as outlined in the Innovation Union flagship.[10] However, despite

[10] "Innovation Union" flagship COM(2010)546 of 6 October 2010.

the fact that **European research has been excellent** and has been responsible for many new technologies used in industries worldwide, our past record has **not always been so good when it comes to translating scientific leadership into industrial advantage**. The situation in lithium batteries is a clear example of this with European firms holding more than 30% of the relevant patents, without any production of such batteries taking place in the EU.

Investing in the early stages of the adoption and diffusion of new technologies will give us a technological lead to ensure that Europe secures the returns from its innovation in terms of growth and jobs. **"First mover advantage"** can boost productivity, resource efficiency, and market shares. Unfortunately, the stakeholder consultation shows that uncertainties about the future evolution of new markets often adversely affect business confidence and hold back investment. It is thus essential to dispel the uncertainties in new markets through the creation of a **simple, stable and predictable long-term framework** of Internal Market technical rules, standards and other legislation.

After extensive public consultation and analysis, six fast-growing initial areas for priority action have been selected. These priority areas can both contribute to economic recovery in the short- and medium-term and have a significant impact on our longer-term growth. They will provide the industrial infrastructure needed for what has been identified as a "**Third Industrial Revolution**".[11] The establishment of this infrastructure has the potential to create thousands of new businesses and millions of new jobs and lay the basis for a sustainable global economy in the 21st century. The priority action lines encompass the key components needed for a new industrial society, where new energy, information and production technologies will transform industrial production and markets. Nowhere will the impact be more profoundly felt than in the six priority areas identified. Investment in new technologies in these areas will help deliver the Europe 2020 goal of a sustainable and high-employment economy.

The priority areas are highly correlated with the areas of investment for Cohesion policy 2014-2020[12]. They are all markets where new technologies are ready to deliver new products or increase productivity. These new technologies will revolutionize engineering (e.g. intelligent materials) and transform the production of goods (e.g. 3D printing), as well as providing game-changing new foundations for traditional markets, such as smart grids, clean vehicles or bio-based plastics. Therefore Member States must take them into account in their industrial policies, as well as in their strategies for social cohesion and economic development of their regions.

Of course, the focus on these priorities does not imply the neglect of other sectoral efforts currently underway as part of our industrial policy flagship defined in 2010. For instance, the review of LeaderSHIP 2015 strategy will help to improve the competitiveness of EU shipbuilding industry which contributes to sustainable sea-borne transport, infrastructure and advances into maritime energy generation. A High Level Roundtable on the future of the European steel sector will identify the factors affecting the competitiveness of this industry and issue concrete recommendations to maintain its competitiveness. This proactive approach to industrial policy will be extended to other key areas such as creative industries, space, technologies for improved health care in particular for the ageing population, medical devices and tourism.

[11] See Rifkin J. "The Third Industrial Revolution: How Lateral Power Is Transforming Energy, the Economy, and the World » Palgrave McMillan, New York 2011.

[12] Cohesion Policy 2014 -2020: Investing in growth and jobs COM(2011)614 of 6 October 2011

1. Priority Action Lines

i) Markets for advanced manufacturing technologies for clean production

Advanced manufacturing technologies that enable clean production are a key part of the new industrial revolution. For example, 3-D printing allows production in much smaller quantities than is currently economically feasible, enabling low-cost customised production for new niche products and opening up new market opportunities for innovative SMEs. Tomorrow's factories will use highly energy- and material-efficient processes, employ renewable and recycled materials, and increasingly adopt sustainable business models such as industrial symbiosis to recover materials and dissipated heat and energy. These technologies represent an important business opportunity, with a **global market that is expected to double in size to over € 750 billion by 2020**. EU industry is already a world-leader in these technologies, with a world market share of over 35%[13] and a patent share of over 50%[14].

Policy co-ordination of EU and Member State policies and stakeholder efforts could be enhanced through a dedicated Task Force for Advanced Manufacturing Technologies for Clean Production. This would provide leadership and co-ordination and ensure the wider dissemination and commercialisation of the results of the public-private partnerships. It could also promote demand-side innovation measures,[15] including timely internal market regulation and standardisation, and innovative public procurement.

High cost and high risk investments in proof-of-concept demonstration projects and pilot lines will require public-private partnerships (PPPs) with industry at EU level to ensure timely commercialisation. A major role may be played by Public Private Partnerships under Horizon 2020, such as in the areas of robotics and of sustainable process industries, along with demonstration projects for Key Enabling Technologies. The NER300 funding programme for innovative low-carbon energy demonstration projects and the Sustainable Industry Low Carbon (SILC) grant scheme supporting innovation in greenhouse gas efficiency will also play an important role.

The Commission will lead a Task Force for Advanced Manufacturing Technologies for Clean Production in 2013 to foster the development and adoption of these technologies by European industry. Following industry consultations, the Commission will assess the impacts of a potential Public Private Partnership in the area of sustainable process industries.

Member States are invited to promote the commercialisation and deployment of advanced manufacturing technologies and to develop cross-border collaboration taking into account their national specialisations and needs.

ii) Markets for key enabling technologies

The global market in Key Enabling Technologies (KETs), which comprises micro- and nanoelectronics, advanced materials, industrial biotechnology, photonics, nanotechnology and

13 Roland Berger "GreenTech Made in Germany: update 2012" http://www.rolandberger.com/media/pdf/Roland_Berger_Umbau_Energiesystem_20120208.pdf

14 "European Competitiveness Report 2010" SEC(2010) 1272

15 On this concept see “Trends and challenges in demand-side innovation policies in Europe » at http://ec.europa.eu/enterprise/newsroom/cf/itemdetail.cfm?item_id=5532&lang=en&tpa_id=135

advanced manufacturing systems, **is forecast to increase by over 50% from € 646 billion to over € 1 trillion by 2015**, which is equivalent to around 8% of the EU's GDP. Europe is a global leader in R&D for KETs, with a global patent share of more than 30%. However, in the past the EU has often been slower than our trading partners in converting research into marketable goods and services.

A Communication[16] issued in June 2012 set out the EU's strategy to speed up the development and industrial deployment of KETs-based products. This new strategy is based on four pillars: the adaptation and streamlining of EU policy instruments; better coordination of EU and Member State policies in order to achieve synergies and complementarities; the establishment of adequate and dedicated governance structures within and outside the Commission to ensure effective implementation; and the mobilisation of existing trade instruments to ensure fair competition and an international level playing field. Attention will also be paid to the development of the Internal Market for innovative products, in order to promote science and technology-related skills and encourage KET-related entrepreneurship[17]. There is a need to examine how to best maintain and develop a strong European supply basis for KETs, e.g. for the components used in the telecommunications & IT sectors.

The Commission will implement the European Strategy for Key Enabling Technologies ensuring better co-ordination of EU and Member State technology policies, the funding of essential demonstration and pilot lines and cross-cutting KET projects, and the timely development of the Internal Market for KET-based products. Ensuring the industrial deployment of KETs will be a key component of relevant European Innovation Partnerships.

The Member States and the regions are invited to exploit research and innovation strategies for smart specialisation, to support development research including pilot lines and demonstration projects and to promote co-operation along the value chain.

iii) Bio-based product markets

Bio-based industries use renewable resources or apply bio-based processes in their production processes. Bio-based products offer several advantages for industrial competitiveness and the environment. Compared with fossil fuel processes, most bio-based production processes consume less energy, emit less carbon dioxide and volatile organic compounds, and generate fewer toxic waste. They can both reduce production costs and improve environmental performance. The volume growth of EU bio-based chemical products up to 2020, including bio-plastics, bio-lubricants, bio-solvents, bio-surfactants and chemical feedstock, is estimated at 5.3% p.a., resulting in a **market worth € 40 billion** and providing over 90,000 jobs within the biochemical industry alone[18].

Establishing an Internal Market for bio-based products requires the development of standards and the updating of regulations[19]. CEN is already working on standardisation mandates for bio-fuels and bio-based products in general, as well as on specific mandates for bio-polymers, lubricants, solvents and surfactants[20].

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16 "A European strategy for Key Enabling Technologies - A bridge to growth and jobs" COM(2012)341

17 KETs have also been identified as a priority area for lending enabled by the EIB capital increase.

18 Europe Innova Report “Assessment of the Bio-based Products Market Potential for Innovation” 2010

19 " Innovating for Sustainable Growth: A Bioeconomy for Europe" COM(2012) 60 of 13 February 2012.

20 http://www.cen.eu/cen/Sectors/Sectors/Biobased/Pages/default.aspx

An institutional Public Private Partnership based on the Joint Technology Initiative approach on Bio-based Industries for Growth could leverage private sector investment, facilitate the efficient and sustainable scaling-up of biomass supplies, support large-scale bio-refinery demonstration projects, promote Green public procurement, and develop new bio-based products and materials. Innovative processes and technologies can facilitate exploitation of currently unused crop residues and marine biomass.

The Commission will implement the bio-economy strategy and will foster markets for bio-based products, speeding up the development of standards and their international recognition, promoting labelling and green public procurement, and will work with industry to develop detailed proposals for a bio-economy PPP (2013-14 onwards).

iv) Sustainable industrial policy, construction and raw materials

Reducing costs, increasing energy and resource efficiency and reducing waste will boost the competitiveness of the construction sector. The energy used in residential, commercial and public buildings accounts for 40% of the EU's final energy consumption and contributes to CO2 emissions and air pollution. New investments in energy efficiency in residential and public buildings and infrastructure have strong growth potential and are expected to be worth some **€25-35 billion per year by 2020**[21]. Moreover, it is proposed that a significant share of the Structural and Cohesion Funds will support the shift towards the low-carbon economy.

New European standards are needed for sustainable construction products, processes and works in order to maintain a coherent Internal Market for both products and services. The international competitiveness of EU building services can be enhanced inter alia by ensuring the international uptake of the Eurocodes construction standards. The Energy-Efficient Buildings public-private partnership should accelerate the transition from research to market.

The Ecodesign directive[22] has set the requirements for a number of energy-related products, including motors, pumps, fans and chillers. Measures for other household goods and industrial equipment are underway. Although energy has been the main resource targeted so far, the Directive foresees improvements related to all environmental aspects, including interalia material efficiency. It will be applied gradually to a wider range of industrial products having significant environmental effects.

Action also needs to be taken in order to develop further EU-wide markets for waste recycling and to move towards a closed-loop economy. New European standards for graded qualities of recycled materials (e.g. metals, wood and textiles) would also foster market development. Additional demonstration projects for recycling, dismantling, and sorting technologies are urgently needed for specific applications, such as the RECAP pilot project on better recycling mixed plastics. Innovative technologies for waste and resource management could also be promoted through the exchange of good practices. Cohesion and Structural Funds and other public funding, incentive schemes and price signals could increasingly promote recycling, reconditioning, and reuse in preference to incineration.

Non-energy non-agricultural raw materials are vital for the competitiveness of EU industry. Innovation can help reduce supply pressures. This can be achieved, for example, by

21 "Impact Assessment of Energy Efficiency Directive" SEC(2011) 779 of 22 June 2011.
22 http://ec.europa.eu/enterprise/policies/sustainable-business/ecodesign/index_en.htm

developing advanced extraction (including seabed mining) and processing methods, designing products to facilitate high-quality recycling, and by enabling "urban mining". The EU must improve co-operation and information sharing between Member States on raw materials to achieve the critical mass needed to develop closed-loop solutions for material value chains. The European Innovation Partnership on Raw Materials[23] will bring together all relevant stakeholders to accelerate the availability of technological and other solutions to the market. The Commission will then translate this Strategic Implementation Plan into an operational programme.

New European standards will be developed for sustainability criteria related to construction products and processes and the international uptake of Eurocodes will be promoted as part of the implementation of the Action Plan on Sustainable Competitiveness of the Construction Sector in cooperation with the Tripartite Strategic Forum[24](2013-14).

To accelerate the transition from research to market, concrete actions will be proposed within the framework of the Energy-efficient Buildings public-private partnership and through a Communication on Sustainable Buildings (2013).

The Commission will implement specific ecodesign regulations on industrial product, including in particular those having a significant impact on the environment during their life cycle; support the faster and cheaper delivery of ecodesign policy objectives through sectoral voluntary agreements; jointly review the energy labelling directive and certain aspects of the ecodesign directives to maximise their effectiveness; support ecodesign advisory services through the Enterprise Europe Network to better address the needs of SMEs (2012 onwards).

The Commission will further develop stable recycling markets and increase collection rates through a planned review of specific aspects of the EU's waste policy (in 2014) and through analysing existing extended producer responsibility schemes with the aim of identifying the most cost-efficient schemes and defining best practices and guidelines (2013/14).

Following the launch of the European Innovation Partnership on raw materials in November 2012, the Commission will develop an operational programme on raw materials based on the Strategic Implementation Plan (September 2013).

Member States are invited to develop strategies adapted to their national specificities to promote recycling and develop low-energy buildings.

v) Clean vehicles and vessels

Vehicles with alternative powertrains and/or using alternative fuels are a key stage towards sustainable mobility. Plug-in electric vehicles and hybrids are expected to account for some **7% of the market by 2020**. Vehicles with combustion engines also will become increasingly electrified. As well as stimulating growth and jobs, investments in clean mobility can yield additional benefits, including improved air quality and reduced health impacts.

[23] "Making raw materials available for Europe's future wellbeing – proposal for a European Innovation Partnership on raw materials" COM(2012) 82.

[24] Announced in the Communication "Strategy for the Sustainable Competitiveness of the Construction Sector and its Enterprises" COM(2012) 433.

Wide coordination is needed in order to develop markets for clean vehicles and ships. In particular, the deployment of electrical mobility will require profound adaptations of industrial value chains, business models, skills, and consumer attitudes, as well as setting up recharging infrastructures. On-going standardisation activities for interoperability and connectivity need to be concluded quickly and followed up by further standards for vehicles and infrastructures. UNECE safety requirements for all components and systems (including batteries) and EU environmental regulations need to be adapted. International agreements on standards and regulations notably in the UNECE framework will help to save costs and speed up market growth. Cooperation with our largest trade partners on standards, research and regulatory aspects will also help uptake, e.g. the EU-US Workplan on eMobility adopted in the framework of the Transatlantic Economic Council.

Legislative proposals on smart grids, the Trans-European transport network[25] and on alternative fuel infrastructures should facilitate the roll out of recharging/refuelling infrastructures, particularly in cities. Regional and local authorities should also play a role in encouraging market uptake, e.g. through infrastructure development, public procurement, and non-financial incentives such as priority access to city centres. Following on from the Green eMotion project, R&D and demonstration projects should be developed under Horizon 2020, using Cohesion and Structural Funds, and by Member states, in combination with EIB loans.

Following up the Final Report of the CARS21 Group, the Commission will coordinate all policy actions supporting the market introduction of clean vehicles, including the deployment of plug-in electric and hybrid vehicles by ensuring timely regulation and standards, facilitating the roll out of recharging infrastructure, and potentially providing seed funding for key R&D and demonstration projects (CARS 2020 Communication by November 2012).

As announced in the 2011 White Paper on Transport[26], the Commission will issue an alternative fuels strategy, which will also address an appropriate recharging/refuelling infrastructure.

Building upon current industry consultations, the Commission will assess detailed proposals to follow up the Hydrogen and Fuel Cells PPP and the Green Cars PPP.

Taking into account national specificities and needs, Member States are invited to support demonstration projects and develop appropriate infrastructures for clean vehicles and vessels adapted to their needs and following recommendations in the European Semester.

The Member States and the regions are invited to exploit research and innovation strategies for smart specialisation, to support development research including pilot lines and demonstration projects and to promote co-operation along the value chain.

vi) Smart grids

Adequate infrastructure (including smart grid, storage and balancing capacity solutions) is needed to integrate renewable energy into the electricity system, contribute to energy efficiency, and facilitate new demands, e.g. for electric vehicles. The Third Energy

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[25] "Proposal for a Regulation of the European Parliament and of the Council on Union guidelines for the development of the trans-European transport network, COM(2011)650/3"

[26] Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system. COM(2011) 144

Liberalisation Package set out requirements for the installation of intelligent metering systems in at least 80% of households by 2020 as a first step towards the deployment of smart grids in the EU, whilst the Smart Grids Communication[27] sets the overall policy framework to drive forward their deployment. Overall, **by 2020, the EU will need to invest an estimated €60 billion in these grids**, rising to around € 480 billion by 2035.

It is essential to set up the right framework conditions for industry to develop the technologies and production capacities needed to deliver this investment[28]. In parallel, the EU must deliver the standards needed to ensure the interoperability of smart grids across borders, as well as a common minimum set of standards for meters and advanced metering infrastructures. The Commission has already issued the mandate M/490 in 2011 to the European Standardisation Organisations to develop a first set of Smart Grid standards by the end of 2012. Regular exchange of information takes place with international actors such as the US National Institute for Standards and technology in order to develop compatible standards where possible. A general framework for a broader introduction of smart appliances still needs to be put in place, including for the more efficient use of low voltage devices. Based on cost-benefit analysis, key performance indicators for public procurement should be compiled to ensure the recognition of potential benefits. The potential for integrated, efficient and flexible small-scale combustion installations could be achieved through timely setting of appropriate emissions standards. Finally, appropriate R&D and innovation demonstration projects need to be developed through the European Industrial Initiatives on Electricity Grids, the SET-plan, and the European Innovation Partnership on Smart Cities and Communities.[29]

Based on the forthcoming report of the Task Force on Smart Grids, the Commission will define further targets for the deployment of smart grid components, revise and broaden standardisation mandates, develop guidance on key performance indicators, and identify potential Projects of Common Interest[30] for trans-European energy infrastructure (end-2012).

2. Accompanying measures

The co-ordination bodies described above - or new specialist task forces where appropriate - will need to coordinate closely efforts with industry and Member States to deliver their policy agendas. These groupings will have different structure and time scope depending on the needs of the area of activity. However, all will bring together the relevant stakeholders and public authorities to define the actions required to accelerate the uptake of new technologies and investment.[31]

- First, a **simplified, predictable and stable Internal Market regulatory framework** for new products and services, including the appropriate standards and certification, should be agreed and announced as soon as possible. EU regulators and standardisation organisations need to develop timely regulations and standards for new technologies before their first introduction on to the market - the CEN standardisation mandates for electric vehicles and bio-based products are good examples. The task forces will recommend simplifications to the regulatory and administrative environment in their respective market areas, especially

[27] COM(2011)202 of 12 April 2011.
[28] See the Commission Communication COM(2011) 202"Smart Grids from innovation to deployment".
[29] Investment in infrastructures is also a priority area for lending enabled by the EIB capital increase.
[30] Proposal for a Regulation on guidelines for trans-European energy infrastructure COM(2011)658
[31] They will be set up in full respect of the rules on expert groups and other bodies established by the Commission (C(2010) 7649 and SEC(2010) 1360).

to help SMEs. It has also been recommended to Member States to simplify the regulatory environment in the European Semester.

- **Infrastructure development must be coordinated and synchronised with increases in production capacity**. For example, investment in key EU energy infrastructures such as smart grids and energy storage is essential to the wide adoption of renewable energy, ICT, and the deployment of electric and hybrid vehicles. The provision of adequate and efficient transport infrastructures, inter-operable logistics and high-speed broadband networks are preconditions for industrial development. Likewise, new industrial capacities in production technologies must be developed in a timely manner, with investments in low energy and resource-efficient machinery and equipment.

- Thirdly, it is essential that **R&D and innovation efforts should be coordinated across the EU** to ensure the timely deployment and commercialisation of the technologies. In particular, proof-of-concept demonstration projects and manufacturing pilot lines are preconditions for the deployment of technologies on an industrial scale. Private-public partnerships can provide the funding for such initiatives using Structural funds or in the framework of Horizon 2020 and through other Community programmes. Risk-capital funding from public and most significantly from private sources can also be utilised.

- In addition, the Commission will take complementary measures to ensure that the **necessary skills are available** for the development of these markets and to stimulate demand for the uptake of the new innovations.

New working practices will help companies to employ an ageing workforce and attract skilled people into manufacturing. Novel technologies are changing the mix of jobs and skills required. The Commission will promote the **transformation of workplaces** that stimulate new forms of ‘active jobs’ and encourage the development of new skills, including e-skills.

Wider use of design, as well as other non-technological innovations, is one of the key drivers for developing high value products, increasing productivity and improving resource efficiency. To enhance the role of design in innovation, the European Design Leadership Board has developed a set of proposals including: better access for companies to design; the promotion of design-led innovation for manufacturing systems; the promotion of design competencies; raising the profile of design in the EU research and innovation system; the wider application of design in the public sector; and the differentiation of European design at a global level.

Innovation policy can leverage its impact on economic growth by seamlessly combining the introduction of new technologies and working practices with demand-oriented measures such as standardisation, promoting the uptake of innovations in global supply chains or providing regulatory incentives. Europe has experience in demand-side policies, such as the successful Lead Market Initiative that developed market-specific roadmaps and demand-side policy instruments. Recently, five European Innovation Partnerships have been announced to co-ordinate demand-side and R&D policy instruments.

Following the call of the European Council in March 2012, it is important **to further promote demand-led innovation** and to create the best possible environment for entrepreneurs to commercialise their ideas on the market. Starting in late 2012, the Commission will implement a horizontal action plan with three consecutive phases to boost demand for innovative European goods and services. The first phase serves to identify markets, toolboxes and demand-driven models. In the following phase, the Commission with stakeholders will develop strategic roadmaps for demand-side actions in wider initiatives. In the final phase, the actions set out in the strategic roadmaps of the second phase will be implemented. In parallel, a new monitoring system will measure the impact of demand-side policies and the implementation of the strategic roadmaps.

The Commission will develop and implement a horizontal action plan to boost the demand for innovative European goods and services (2012 onwards).

The Commission will establish a learning network on workplace innovation in Europe to promote labour productivity and the quality of jobs (2013) and will implement an action plan for accelerating the take-up of design in innovation policy (2012 onwards).

In 2013, the Commission will launch an independent review to assess whether the European standardisation system is able to adapt to the quickly evolving environment and to contribute to Europe's strategic internal and external objectives.

B. Access to markets

1. Improving the Internal Market for goods

The Internal Market for goods accounts for 75% of intra-EU trade and possesses enormous untapped potential to boost EU competitiveness and growth. It is a key tool to achieve a highly competitive social market economy. In particular, globalisation, specialisation and innovation are having profound impacts on manufacturing processes, while the distinction between “products” and “services” is becoming increasingly blurred. However, this process may be creating new barriers and hindrances. Single market rules and procedures thus need to keep pace with these developments. Twenty years after the 1992 strategy, a wide range of products is still un-harmonised and mutual recognition clauses in Member State legislation are not always correctly applied. Next year, the Commission will conduct a critical evaluation of the *acquis* for industrial products, including a study and extensive consultation, and will produce a Roadmap for reform of the Internal Market for industrial products.

Further progress needs to be made towards the full internal market integration of certain sectors, such as **security and defence**. Despite the implementation of the Defence package, the defence sector still maintains a strongly national dimension and is therefore unable to benefit from the potential economies of scale that are necessary to improve competitiveness and profitability. Further EU-level research and innovation initiatives are under preparation in the civilian security area. A Task Force on Defence is helping to develop a comprehensive strategy for a world-leading defence industry that is competitive both within and outside Europe. Likewise, products and services based upon satellite data have a high potential for economic growth, and their market development should be encouraged and sustained.

In 2010, as part of its Smart Regulation strategy,[32] the Commission developed **Fitness Checks** to assess the overall regulatory framework in a particular policy area. These checks were designed to identify excessive administrative burdens, examine regulatory overlaps, gaps and inconsistencies and assess the cumulative impact of legislation. Their findings serve as a basis for policy decisions on the future of the relevant regulatory framework. Fitness checks are underway in specific policy areas, such as the information and consultation of

[32] "Smart Regulation in the European Union" COM(2010)543 of 8 October 2010.

workers, the type-approval of motor vehicles and EU environmental freshwater policy. However, the ambition to take an overview of the main policies affecting a single economic sector has not yet been put into effect. The Commission will therefore carry out pilot horizontal sectoral fitness checks. The first two of these will look at **petroleum refining and the aluminium sectors**. Both sectors are critical for the EU's industrial value chain, but urgently require new investment to be made in the face of strong international competition. The fitness checks will focus on the implementation and interaction of those policies that are most important for the competitiveness of these sectors[33]. Future fitness check in other industrial products will follow.

Governance and regulatory obstacles to the Internal Market also arise from policy areas that are regulated by Member States, for example technical rules, refusals to apply **mutual recognition andmismatches between the 27 different sets of taxation rules**. An upstream analysis of draft technical rules can prevent the emergence of regulatory obstacles. This is precisely the objective of the 98/34[34] notification procedure, which requires draft legislation containing technical rules on products and information society services to be communicated to the Commission before they are adopted. The preventive nature of this procedure has avoided a large number of contraventions of free movement of goods rules. This notification procedure can also be used, however, to improve national legislation in line with "Better Regulation" principles and through benchmarking. Its potential can be further exploited by recommending that Member States use competitiveness proofing in the context of national impact assessments.

"**Green products and services**" represent a dynamic, innovative and growing market. However, the development in parallel of different and often inconsistent technical rules and labelling schemes in Member States and through private initiatives might lead to confusion of consumers, and obstacles to the free movements of these products and services across the internal market. The Commission is studying the best possible ways to integrate "green products and services" in the Internal Market, including environmental footprinting[35].

The lack of coordination between Member States on methodologies and criteria for taking decisions on **pricing/reimbursement of medicinal products** causes incoherencies and delays in access to innovative medicines. Whilst this is being partly addressed through the Transparency directive and the work on health technology assessment, a wider policy strategy agenda and roadmap is needed in order to secure the competitiveness and long-term viability of the EU pharmaceutical industry.

There is scope for improving the EU framework for **Market surveillance**. The General Product Safety Directive (GPSD) applies to all consumer products, both harmonised and un-harmonised, while the provisions on market surveillance currently contained in Regulation 765/2008 and in sector-specific legislation apply to harmonised products, whether consumer or industrial. There is thus the potential for confusion among both national authorities and economic operators as to which system applies. A new proposal under preparation for a market surveillance regulation would combine all of these market surveillance provisions and address the deficiencies of the present legislative framework.

[33] E.g. the assessments by Member States presented at the Commission's EU Refining Roundtable on 15 May 2012 concerning the combined impact of EU policies on refining.

[34] Directive COM(98/34)/EC Laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services.

[35] The environmental footprint proposal announced in the Single Market Act will be launched in 2013 in a Commission Communication.

Market surveillance protects European citizens from non-compliant products (e.g. risks to health and safety) and ensures fair trading conditions. The policing of the Internal Market is done at national level, with Member States responsible for both surveillance and enforcement. Surveillance in particular is an enormous task. There is evidence of weak market surveillance for some products, such as capital goods manufactured by the European machinery industry[36]. A multi-annual action plan for market surveillance is needed to energise pan-European market surveillance and boost cooperation and mutual assistance. This will make life much harder for rogue traders, and help to further integrate the single market for compliant and safe products. Responsible operators will therefore no longer be put at a competitive disadvantage.

As the borderline between services and goods becomes less clearly defined, barriers to trade in services are directly hampering trade in goods to an increasing degree. Business services, in particular, are crucial to industrial competitiveness and innovation. They are particularly relevant for SMEs, who rely more on purchasing services from the market than from large companies.

By the end of 2012, the Commission will adopt a Product Safety and Market Surveillance Package that would consist of a revised General Product Safety Directive, a new Market Surveillance Regulation and a Communication on a multi-annual action plan for market surveillance for 2012-15.

The Commission will evaluate the state of the "acquis" in the area of industrial products as a whole, with a view to preparing a Roadmap for Reform of the Internal Market for industrial products (2013).

The Commission will undertake fitness checks of the aluminium and petroleum refining sectors focussing on the implementation and interaction of those policies most important for competitiveness.

The Commission will develop a comprehensive strategy to support the competitiveness of the defence industry and enhance the efficiency of the defence market. A Communication is expected by April 2013.

The Commission will bring forward additional initiatives to foster internal market integration in the fields of security and space.

The Commission will further exploit the potential of the 98/34 procedure as an instrument for industrial policy and to help guide future EU legislative priorities, in particular to encourage Member States to introduce impact assessments and competitiveness proofing at the draft stage of their national legislative processes.

The Commission will launch a policy strategy agenda to strengthen the competitiveness of the pharmaceuticals industry.

A High-Level Group on Business Services will be created by the end of 2012. Following the report of this Group, the Commission will develop a future work programme with policy recommendations by 2014.

[36] DG ENTR conference on Market Surveillance and Machinery, 24 November 2011: http://ec.europa.eu/enterprise/sectors/mechanical/machinery/market-surveillance/index_en.htm

2. Fostering entrepreneurship to render the Internal Market more dynamic

Although more than one third of all new jobs come from small, high-growth firms, EU small firms do not grow as fast as in the US[37]. Building upon the Small Business Act, an Entrepreneurship Action Plan will foster the growth of start-ups, facilitate the transfer of businesses, provide support for early-stage businesses, and develop efficient bankruptcy procedures that give entrepreneurs a second chance.

Entrepreneurs need to exploit the full potential of the digital single market **in the EU that is expected to grow by 10% a year up to 2016**[38]. The Commission has put the development of the internet and digital technologies at the heart of the Europe 2020 strategy through the **Digital Agenda for Europe**[39] and Industrial Policy Flagships. EU policy provides the framework conditions for the digital single market, including the legislative basis for e-commerce (Directive 2000/31/EC)[40]. In the future, the Common European Sales Law will offer uniform rules for cross-border online sales and the digital dimension is a key part of the European Consumer Agenda strategy[41].

Member States and the Commission must contribute to speed up the full implementation of the Digital Single Market. Member States have to simplify VAT registration procedures and create one-stop electronic registration to facilitate cross-border digital commerce by small businesses. The Enterprise Europe Network will provide training and inform those SMEs who want to develop online business about their obligations in the context of cross-border sales. Guidelines and quality labels for **eSkills** could provide a commonly agreed skillset for education and training providers both at EU and at Member State level. Standards and guidelines are essential for digital inter-operability in supply chains.

However, it is not sufficient simply to develop the framework conditions and to encourage entrepreneurs to exploit the digital single market. Europe also needs to unleash entrepreneurship in the digital economy itself in order to succeed.

The Commission will propose an Entrepreneurship Action Plan setting out recommendations to Member States on improvements to the framework conditions and support measures for entrepreneurship (November 2012) taking also additional measures to stimulate the uptake of digital technologies and e-commerce. The Commission will also propose targeted actions first quarter 2013 to support web entrepreneurs in the EU.

3. The Internal Market for technology, the unitary patent and the protection of intellectual property rights

Intellectual property rights (IPRs) are vital for innovation and growth as they provide protection to those companies that invest in R&D. By rewarding creativity and inventiveness and protecting companies and innovation from undue appropriation and use of technological knowledge, IPRs are at the heart of the innovation system and form the basis of all technology

37 Albert Bravo-Biosca "The dynamics of Europe's industrial structure and the growth of innovative firms" JRC Conference Seville, October 2011.

38 Boston Consulting Group "The internet economy in the G-20" March 2012.

39 COM(2010)245.

40 COM(2011) 942 "A coherent framework for building trust in the Digital Single Market for e-commerce and online services". See also COM(2011) 942 final “A coherent framework for building trust in the Digital Single Market for e-commerce and online services”.

41 COM(2012)225 "A European Consumer Agenda - Boosting confidence and growth".

transfers. It is necessary to ensure that the IP framework serves the needs of the new economy, in particular for open and collaborative innovation.

The introduction of the **unitary patent** and the development of a **unified patent litigation system** in Europe will reduce costs[42] and the fragmentation of patent protection in the Single Market, thereby eliminating unnecessary litigation costs and enhancing legal certainty. In addition, a cost free automatic translation tool[43] will be available for all European languages by the end of 2014. Inventors seeking patent protection have tools available for accelerating the procedure up to the grant of a patent. Initiatives based on utilising the work of other offices as well as an international harmonisation of substantive patent law (comprising a worldwide harmonised grace period to be elaborated with all its associated issues), can further strengthen the patent system in the longer term and contribute to further reducing costs.

Other instruments could be used to complement the patent system. Optimising the use and protection of trade secrets is one of them. Not all innovation steps are patentable, but their results may merit protection against misappropriation. Whilst some inventions may be patentable, companies may consider they are better protected through secrecy. Innovators may thus sometimes choose to protect innovations (and the returns to innovation) just keeping their trade secrets undisclosed. There is no EU law on the protection of trade secrets and this area is regulated at national level. However, there are significant differences in national laws on the nature and scope of trade secrets protection, as well as regarding the means of redress and remedies. The Commission is examining whether existing differences in national approaches may create barriers and transaction costs for companies operating cross-border, not least for SMEs.

Non-listed firms are subject to national accounting rules resulting from the transposition of the Fourth Accounting Directive. Although this directive allows Member States to develop rules in that sense, there is currently no widespread acknowledgment of the value of patents and other IPRs, especially in SMEs' financial statements. Steps will be taken to explore ways that can allow firms to get effective recognition of the **value of their patents**, including in their financial statements and to explore potential benefits of such enhanced disclosure in terms of access to finance. In addition, insurance schemes against IP litigation are becoming increasingly significant.

An effective IPR system needs to include ex-ante safeguards and ex-post enforcement against those who do not respect the rules. Patent ambushes, patent hold-ups, patent wars and infringements of these rights (such as counterfeiting and pirating) harm victims directly and undermine the trust in the IPR system.

Rapid technological progress in industries with economy-wide significance has led to risks that may result from *patent thickets*[44] and *patent ambushes*[45]. Studies have detected **patent**

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42 Registration and translation costs for obtaining patent protection in Europe will fall by up to 80%.

43 See "Patent Translate", http://www.epo.org/searching/free/patent-translate.html.

44 "Patent thickets" occur where a significant number of patents bear on a particular product and are held by different patent owners. Royalty stacking results from independent pricing of these complementary patents. Patent thickets are prevalent in communication technology, semiconductors, optics, electrical machinery and medical technology.

45 "Patent ambushes" occur when the participant in a standard setting procedure discloses that he holds patents or patent applications regarding a technology included in the standard only once the standard is adopted and then refuses to grant a licence for these patents or grants it only on unfair, unreasonable or discriminatory terms.

thickets in 9 out of 30 technology areas. An efficient and proportionate regulatory system could foster forms of pro-competitive cross-licensing or patent pool arrangements as effective market-driven instruments to mitigate those risks. As part of that regulatory system, the Commission will update its rules on agreements on technology transfer. In addition, the work on existing safeguards such as fair, reasonable and non-discriminatory terms (FRAND) licensing can be taken further. Complementing the safeguards, a closer cooperation and information exchange between the patent offices and the standardisation organisations could bring significant improvements in the short run.

IPRs are challenged by ever increasing levels of **counterfeiting and pirating** of products. Commission reports on customs seizures at EU borders show that the number of seizures and cases has increased significantly since 2000. IP rights which cannot be enforced are meaningless. Therefore, a minimum common framework governing the civil enforcement of IPR has been in place since 2004 (Directive 2004/48/EC), allowing not only for action against direct infringers but also against (online and offline) intermediaries whose services are used by third parties to infringe. This framework, which is currently under review, allows rightholders to take action if their IP rights have been infringed.

Complementary to measures, remedies and sanctions provided for by the law, voluntary collaborative approaches could strengthen in a very pragmatic way the fight against counterfeiting and piracy such as the EU Observatory on Infringements of IPRs[46]. Also the Memorandum of Understanding on the sale of counterfeit goods via the internet[47] has proven to be a successful way to reduce the sale of fakes via the internet.

- *The Commission is examining the very fragmented legal framework for trade secrets protection and is working on possible options to make it efficient and less costly for business and research bodies to invest in, license, transfer and share valuable knowledge and information throughout the Internal Market.*

- *The Commission will consider most adequate valuation methods as well as the relationship between the IPR market and the appropriate valuation and disclosure of IPRs in accounting, following the conclusions of an expert group on these issues in 2013.*

- *The Commission will consider measures that can contribute to increase transparency and improve the treatment of IPR in standardisation.*

- *The Commission will foster cooperation between patent offices and standard setting organisations including initiatives such as patent landscaping and database linking.*

- *The Council and European Parliament should urgently adopt the revision of Regulation (1383/2003/EC) on customs enforcement.*

4. International markets

The European Union is the world's leading trading power, but the world economy is changing rapidly and becoming increasingly multipolar. The major emerging economies (notably Brazil, Russia, India and China) continue to grow quickly, and most of them have put in place

46 Regulation (EU) No 386/2012 of 19.04.2012; OJ L 129, 16.05.2012, p.1
47 http://ec.europa.eu/internal_market/iprenforcement/stakeholders/index_en.htm#maincontentSec2

ambitious industrial policies with a strong focus on technologies and industrial innovation in order to "climb the quality ladder" and move towards greener production. There is also a disturbing tendency to resort to protectionist measures and discriminatory practices[48] .

The Commission works to open markets and connect Europe to the main sources and regions of global growth. The Commission will continue to push for an **ambitious trade and investment agenda**[49], in a spirit of reciprocity and mutual benefit as well as a comprehensive enforcement agenda, focusing in particular on market access, dismantling barriers, opening up public procurement, ensuring effective enforcement of trade rules (e.g. related to subsidies), the best standards of protection for international investments and the full protection of intellectual property rights. The consistent application of competitiveness-proofing in impact assessments at the start of trade and investment negotiations, and providing a comprehensive analysis for the European Parliament and the Council once negotiations are concluded, will help to optimise the impact of FTAs on industry and on the EU economy.

The notification procedure of the WTO Technical Barriers to Trade (TBT) is a powerful tool to improve market access, but stakeholders, especially SMEs, do not make sufficient use of it. The Commission will ensure that TBT information about market access requirements is made more accessible and will make the procedure more visible and accessible to stakeholders.

In conformity with the Lisbon Treaty, **a comprehensive international investment policy is being developed**[50] through a combination of bilateral negotiations, dialogues with key partners and the active participation in international fora. This should lead to improved access to key markets, high standards of protection of EU investments in third countries and provide a level playing field for EU companies. In parallel, it is essential to maintain an open and non-discriminatory environment in order to further increase the attractiveness of investing in the EU[51], in particular for green-field foreign direct investments that create growth and jobs and improve, where necessary, the transparency of FDI in the EU.

To secure access to raw materials, and also to its trade policy initiatives[52], the Commission will continue developing its "**raw materials diplomacy**"[53]and improve the targeting of regulatory cooperation in this area. Target regions and countries include Greenland[54], Mediterranean partner countries, South Caucasus countries, Latin America, Africa and Asia.

EU companies need to be better supported and accompanied in their internationalisation process, in order to increase the share of internationally active EU SMEs (currently estimated at 13%). Commission-led "**Missions for growth**" in third countries with representatives of the EU industry and SMEs, which should not be confused with the traditional trade promotion activities, can play a positive role in providing a common framework for industrial and SME policy cooperation and help foster business relations.

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48 COM(2012)70, "Trade and Investment Barriers Report 2012".

49 COM(2010)612, "Trade, Growth and World Affairs". See also SWD(2012)219.

50 COM(2010)343, "Towards a comprehensive European international investment policy".

51 European Parliament resolution of 3 July 2012 on the attractiveness of investing in Europe.

52 DG TRADE, "EU Trade Policy for Raw materials. Second Activity Report".

53 In this field the Commission is also developing other initiatives such as the so called country-by-country reporting.

54 A letter of intent on co-operation in the area of mineral resources with Greenland was signed in June 2012 - Developing a European Union Policy towards the Arctic Region, JOIN(2012) 19 final

The EU is working on a review of the strategy for the enforcement of intellectual property rights in third countries as a major component of its initiatives against counterfeiting. In this context, the Commission directly supports SMEs to protect their intellectual assets in key foreign markets with the SME IPR Helpdesks and user-friendly internet-based tools, like the joint EU and US TransAtlantic IPR Portal. The effectiveness of EU business support structures in third countries will also be upgraded.

Finally, the Commission will accompany external actions with internal initiatives and pursue mutual supportiveness between policies and regulatory initiatives in the Single Market and external priorities, avoiding regulatory approaches that distort trade.

The Commission will:

– *Take actions to increase the visibility of the TBT notification procedure and make it more accessible to industry, in particular to SMEs.*

– *Further develop the "raw materials diplomacy" in a targeted way and fully implement the SMEs internationalisation strategy*[55]*.*

– *Support the enforcement of intellectual property rights in third countries and extend tools to secure SME IPRs in international markets, including SME IPR Helpdesk initiatives in the ASEAN and Mercosur regions and improve the effectiveness of EU business support structures in third countries by linking them with the Enterprise Europe Network.*

– *Further promote international regulatory cooperation and convergence, notably vis-à-vis neighbouring countries, in order to accompany the creation of markets for new products and technologies and in view of ensuring mutual supportiveness between the Single Market initiatives and external priorities.*

C. Access to finance and capital markets

The recovery and future growth of European industry depend on the availability of capital to carry out the necessary investments to adopt new technologies and equipment to increase our competitiveness. Unfortunately, our stakeholder consultation and surveys clearly show that **access to capital markets and credit constitutes a major problem for European business**.

The weak demand for credit explains in part the currently low levels of bank lending, but supply side restrictions are very important too.[56] Necessary deleveraging and restructuring of the banking sector are likely to delay the recovery of bank lending. The problem is particularly serious for SMEs. According to the April "SME Access to Finance Survey" conducted by the ECB, SMEs reported higher rejection rates when applying for a loan (13%, up from 10%).

[55] COM(2011)702, "Small Business, Big World - a new partnership to help SMEs seize global opportunities".

[56] The ECB's Financial integration report for 2012 states that "impairment and fragmentation of euro area banks' funding channels also affected, via the transmission channel, the borrowing conditions available to the real economy". ECB, Financial Integration Report, April 2012, page 57.

Most European industrial firms rely heavily on bank credit. In the USA, debt securities and stock market capitalisation both exceed the total volume of bank assets. Capital market debt accounts for corporate funding is just 7% of GDP in Europe compared with 35% in the USA[57] This structural feature of the EU economy makes EU industry more sensitive to the impact of the banking crisis, given the limited availability of alternative financing sources.

Against this backdrop, the Commission is proposing a number of measures to improve the access to capital for industry. A first group of measures relies on public sector support, while the second group includes measures that could help facilitate access to capital markets.

1. Public sector support to facilitate access to capital to industry

The new programming for the **Multiannual Financial Framework for 2014-20** will simplify and reinforce the effectiveness of financial instruments to support innovative activities. The possibility of using the resources allocated to the **Horizon 2020** in combination with the **COSME** programme will facilitate the transition from technological development to the industrial and market exploitation of new technologies. The expansion of the risk-sharing financing facility will help lower risks for high-growth potential companies.

Cohesion Policy provides an integrated approach to address the needs of SMEs, covering all phases of business creation and development, and is the largest source of EU support to SMEs with a total volume of EUR 25 billion directly targeted at SMEs in the current financial period (2007-13) out of the EUR 55 billion for Regional Policy business support. The competitiveness of SMEs is also a clear priority on which future Cohesion Policy funding will be concentrated. The support measures combine direct financial support, both in the form of grants and revolving financial instruments, with advice and support services, including for vocational training and entrepreneurship. Its aim is to help SMEs benefit from networking and clustering and to develop new business models and bring new ideas faster to the local and global markets.

The Commission will cooperate with the EIB and the EIF to ensure the implementation of more efficient and effective financial instruments for the investment of the resources allocated in the Horizon 2020 and COSME programmes.

Member States should ensure that the effective use of cohesion and structural funds strengthened by the concept of "smart specialization" will contribute to growth and job creation by improving industrial competitiveness (2013).

To facilitate access to finance[58]*, the Commission will launch a single portal providing information on how to access finance from the different EU programmes in each country.*[59]

In addition to these measures aiming at the medium-to-long term, the capital increase of the **European Investment Bank** of €10 bn is estimated to generate €60 bn of additional lending

57 Standard & Poors, "The Credit Overhang", RatingsDirect, July 31.2012, page 5.
58 COM(2011) 870 final
59 To access EU financial instruments, please visit the following website to locate banks or venture capital funds that provide finance in your country: http://access2finance.eu

capacity in the near future. In principle, between €10-15 bn will be allocated to SMEs, a similar amount to innovation and between €15-20 bn to resource efficiency[60].

In order to speed up recovery and growth:

– *The increased lending capacity resulting from the capital increase of the EIB will be made available as early as 2013, using the current lending facilities of the EIB. After 2014, the new instruments developed for the new financial framework will enter in action.*

– *Member States should examine in the context of the current programming period of structural funds 2007-2013 all opportunities to direct remaining resources towards the six priority lines defined in this communication and in projects aimed at increasing the competitiveness of SMEs in particular.*

– *Implementation of the Action Plan on Access to Finance remains a high priority at European level to improve businesses' access to finance. Member States should also take actions to facilitate financing at the local, regional and national levels.*

– *Member States should also take action to facilitate financing environment at the local, regional and national levels in compliance with State aid rules.*

2. Access to capital markets

The crisis has further reduced the already limited number of financing choices available for SMEs and midcaps. The securitisation market for SME loans remains flat. A revival of this market in an environment of more effective prudential supervision and regulation to preserve the stability of financial markets could contribute to long-term financing of projects.

The deteriorating economic outlook has also taken its toll on the availability of venture capital. Many venture capital funds are nursing their portfolio of companies and are shunning new deals. European venture capital funds continue to be largely nationally oriented, too small and often unable to secure a deal flow as the framework conditions are still not favourable enough.

Facilitating access to capital markets for SMEs has become an important objective at both EU and national level. In December 2011, the Commission adopted an action plan to improve access to finance for SMEs.[61] Among other measures, this action plan includes proposals to create a **true Single Market for Venture Capital funds in Europe** and for a **new European Social Entrepreneurship Funds** regime presented by the Commission in December 2011. Agreement on these proposals by the Council and European Parliament should be reached urgently given the importance of these measures for fast growing SMEs.

In addition to equity, other types of financing channels could be considered.[62] The most traditional of them is the private placement system - well established in the USA - allowing

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60 EIB Lending Priorities Associated with a Capital Increase: A joint European Commission and European Investment Bank report to the European Council at http://www.eib.org/attachments/lending-policy-associated-with-a-capital-increase-final.pdf

61 COM(2011) 870 final.

62 Several Member States already provide SMEs and midcaps with innovative alternative financing means. In Germany, five stock exchanges have carried out 50 bond issuances for midcaps with

the insurance and pension fund industry to supply capital directly to business without banking intermediation. Other channels include supply chain finance, asset-based financing, factoring or invoice discounting, leasing, business angels, and peer-to-peer lending.

Progress in the development of these financing options will take time and require prudential consideration by the regulator. The SME market labels recently proposed in the revision to the **Markets in Financial Instruments Directive** (MiFID) could be very useful to strengthen investor protection. In the meantime, some building blocks to overcome current obstacles to cross border activities can be provided in the short term. For instance, guidelines could be provided to harmonise the scoring of SMEs across the EU. They would facilitate cross border operations by SMEs and midcaps .

In the Green paper to be presented around the end of 2012 on the financing of long term investment in the EU, the Commission will further look into how to facilitate and diversify access to finance for SMEs and midcaps.

The Commission will foster the exchange of best practices amongst Member States on alternative means of financing SMEs and mid-caps. Countries where venture capital markets is still seriously underdeveloped should review the operating environment of venture capital funds to evaluate the appropriate action that would improve the access to equity capital of firms with high growth potential. Equally there should be adequate incentives for business angels to make angel investing attractive.

The Commission invites the Council and the European Parliament to quickly adopt the proposal for a Regulation on European Venture Capital Funds[63]*.*

The Commission will in 2012 complete the examination of tax obstacles to cross border venture capital investments and present proposals, where necessary to facilitate these investments, while at the same time preventing tax avoidance and evasion.

D. The crucial role of human capital

1. Addressing the current challenges: job creation

Market adjustments during the crisis and its aftermath require close coordination of relevant EU policies and for joined-up efforts on the part of the EU and Member States. To that end, Member States have been invited by the Commission [64] to place greater emphasis on job creation policies, as indicated in the Employment Package proposed in April by the European Commission. Member States must emphasise job creation policies, especially in exploiting the potential of new technologies and the green economy and to address youth unemployment. Transforming the economy along these paths will increase competitiveness and provide important sources of *job creation* that **is indispensable to achieve the 75% EU employment target by 2020 through 17.6 million new jobs to be created**.

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individual volumes usually ranging between 30 and 100 million euros. Two new alternative markets will be launched this autumn in France and Sweden. In Italy, the fixed income market will broaden the possibilities for trading to include previously non-listed securities. The Department for Business, Innovation and Skills in the UK has launched a comprehensive review of alternative financing channels, including fixed income markets.

63 COM(2011)860 final

64 COM(2012) 173 final, Towards a job-rich recovery, COM(2012) 299 final, Action for Stability, Growth and Jobs.

Competitive and efficient industrial policy also relies on dynamic labour markets and labour mobility is a key adjustment variable in this process. The transformation of the European Employment Services tool (EURES) into a European placement and recruitment tool is designed to facilitate the matching, placement and recruitment in the EU.

The crisis has shown that, in times of economic contraction, internal flexibility can be very effective as a means of maintaining employment and lowering adjustment costs, as confirmed in the consultation on the Restructuring Green Paper[65], but this requires measures to facilitate smooth employment transitions both by social partners and public authorities. Member States should pay attention to tailored and balanced reforms in employment protection legislation in order to remedy segmentation or to halt the excessive use of non-standard contracts and the abuse of bogus self-employment. Improving the quality of traineeships in Europe will help facilitate education-to-work transitions and increase the employability of young people.

A strong social dialogue is a common feature in those countries where labour markets have proved to be more resilient to the crisis. It is important, therefore, to involve the European and national social partners in more consistent exchanges of views.

The Commission urges Member States to adopt an ambitious approach and policies for job creation as part of their National Job Plans.

The reform of the network of European employment services in the EEA EURES will help manage skills needs and job transitions.

A framework should be finalized in 2012 to engage social partners in the design of employment policies, including skills and training, within the European Semester of policy coordination.

The Commission is working towards a Quality Framework for Traineeships, which should encourage companies to offer traineeships providing good quality learning content, decent working conditions and a good stepping stone for entering the labour market.

2. Investments in skills and training to accompany structural change

The success of European industry will depend on its capacity to tap into the existing and future potential of Europe's human capital, with special focus on the six priority action lines as defined in this Communication. Our consultation has highlighted **the importance that industry attaches to skills for competitiveness**. The expert group on New Skills for New Jobs[66] clearly showed the need to bring together education and training with industry to better anticipate the future demand for skills.

Skills are a key driver for growth, employment and competitiveness: they lay the foundation for productivity and innovation. However, Europe faces serious challenges related to the supply of skills. Already today, **mismatches –** and in some Member States even skills shortages **– hamper growth and employment**. The education system must provide the right skill set for use in industry, particularly for school leavers and graduates. Investment in

[65] "Restructuring and anticipation of change: what lessons from recent experience?" COM(2012)7.

[66] New Skills for New Jobs: Action Now. A report by the Expert Group on New Skills for New Jobs prepared for the European Commission, February 2010 available at http://ec.europa.eu/social/main.jsp?catId=568&langId=en

training is also investment in innovation, since much technical change results from incremental innovations by skilled workers and engineers on the factory floor[67]. However, a prerequisite to investing in new skills and training is the need to further develop tools to monitor and anticipate needs and mismatches in the area of skills. At European level, several tools are currently being developed to that end.

3. Anticipation of employment and skills needs and management of restructuring within businesses

Anticipation of employment and skills needs is recognised as vital to the success of every business; it influences the competitiveness and the long-term perspective of companies irrespective of the industrial sectors in which they are active. In this context, good anticipation and well prepared restructuring can have a positive impact not only on businesses' sustained competitiveness, but can produce positive spillover effects to other markets and sectors, while increasing the overall employability of the labour force and facilitating their transition to new jobs. The responses to the Commission's Green Paper on "Restructuring and anticipation of change: lessons from recent experience" confirm that **anticipation is essential to investments in human capital**, while one of the main challenges remains to define the employment and skills needs and invest accordingly. In particular, high-growth small and medium size businesses' capacity to anticipate employment and skills needs is much more limited as compared to large companies hence the compelling need to boost their capacity to anticipate and make the appropriate choices in terms of human capital investments, also with a view to fully tapping their potential to drive innovation and growth in Europe.

In order to match skills and jobs, the Commission will:

1. develop a European multilingual classification of Skills, Competences and Occupations;

2. promote the creation of the European Sector Skills Councils and of Knowledge and Sectors Skills Alliances and support the development of multi-stakeholders partnerships in the ICT sector to improve the skills shortage in the ICT sector.

The Commission will promote the uptake of standardised skills certification schemes through the Intelligent Energy Europe Programme in 2013/2014.

The Commission will support Member States in "rethinking skills" by providing them with policy guidance in a Communication in November on implementing efficient reforms and developing the effective education and training systems that will lead to a better skills supply.

IV. CONCLUSION: GOVERNANCE AND GOALS

Industry can make a major contribution to take the EU economy out of crisis. This Communication has outlined a proactive industrial policy that can raise our competitiveness and lay the foundations to reindustrialise Europe. The measures proposed serve to enhance and underpin the strategic approach to industrial policy proposed in 2010.

[67] The European Institute of Innovation and Technology (EIT) plays a fundamental role in nurturing talent across borders and fostering people-driven innovation via the integration of research, higher education and business – the Knowledge triangle. Through the Knowledge and Innovation Communities (KICs), the EIT provides new career paths between higher education and the private sector, and innovative schemes for professional development. Entrepreneurship is a key component of the EIT KICs programmes, through which world-class researchers and students are equipped with the knowledge and attitudes to turn ideas into new business opportunities.

In order to ensure the proper implementation of these actions, the Commission will closely monitor a number of key variables.

1. Investment

– *Gross fixed capital formation as a share of GDP was 18.6% in 2011. Before the crisis, it reached 21.25% of GDP in 2007. The investment effort needed to improve our productivity would require pre-crisis investment levels in 2015 and average levels of above 23% until 2020. Investment in equipment is currently between 6 and 7% of GDP. To improve productivity and introduce new technologies it should recover pre-crisis levels and grow steadily at rates above 9% of GDP until 2020.*

2. Internal market trade

– *Trade in goods in the Internal Market is currently just below 21% of GDP*[68]*. In a reinvigorated Internal Market, this rate should be 25% by 2020.*

3. SMEs

– *In conformity with Commission aspirations for the Digital Agenda flagship Market, the number of small firms engaging in e-commerce selling should increase to reach 33% by 2015. The proportion of SMEs exporting inside the Internal Market was 25% according to the 2009 survey*[69]*. The medium-tem objective is to have SMEs equally engaged in market outside the EU as within the internal market.*

Achieving these goals will enable the Union to reindustrialise, raising the share of industry in GDP from the current level of around 16% to as much as 20% in 2020.

The success of industrial policy relies heavily on **our capacity to exploit synergies**. **Community policies must be properly coordinated and synchronised**. EU activities in key areas contributing to the achievement of Europe 2020 objectives, such as investments in infrastructures, R&D and innovation, the development of our Digital Agenda for Europe, policy actions for skills and employment, our trade and investment policy, our internal market policies, our competition policy, transport and maritime policy, our energy, environment and climate policies, will be closely coordinated with developments in industrial policy. The measure of our success will depend to a large extent on our capacity to deliver with maximum joint effectiveness in all of these areas.

Synergies between EU-led actions and Member States' industrial policies must be improved. The new cohesion policy instruments for 2014-2020 will help Member States to increase their competitiveness. A strategy for smart specialisation is required as a pre-condition for the use of the European Regional Development Fund under the thematic objective of strengthening research, technological development and innovation, especially in SMEs, which covers most of the investment priorities proposed as priority action lines in this Communication. Member States should follow up reforms identified by the country-specific recommendations endorsed by the June European Council.

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[68] Source: Eurostat Statistics in Focus 3/2012.

[69] DG Enterprise and Industry, "Survey on Internationalisation of SMEs", 2010.

The implementation of industrial policy also requires a **more effective European governance structure**. Progress has already been made in this regard since the 2010 Communication:

- Closer co-operation with Member States has been achieved through the development of the European Semester and the regular monitoring of competitiveness performance and policies at EU and Member State level through the Article 173 procedure of the Lisbon Treaty. The first of a new series of projects for better practices has been completed on key enabling technologies, to be followed by a further project on foreign direct investment.

- The competitiveness proofing of new Commission proposals has been successfully incorporated into the impact assessment process.

Nevertheless, there is much room for further improvements in governance.

- *Assisted by the High Level Group on Competitiveness and Growth, the Competitiveness Council will annually assess progress in the implementation of structural reforms and on the effectiveness of industrial policy measures to strengthen competitiveness, ensuring that it fits into the European Semester.*
- *SME envoys will report annually on the effectiveness of national and EU measures to improve the competitiveness of SMEs in their own countries and feed into the European Semester.*
- *The different task forces for the priority action lines will be set up as soon as possible. They will report once a year to the Competitiveness Council. They will include in their work information resulting from the programming of structural funds.*
- *The Commission invites regions to build research and innovation strategies for smart specialisation to contribute to the goals of this Communication in close consultation with the private sector and research and innovation actors in order to identify strategic priority areas for knowledge-based investments.*
- *Further efforts are needed to ensure the combination of the use of Community instruments such as Horizon 2020 and COSME, with Structural funds and Member States own funds, notably to deliver major investment projects, including demonstration projects and pilot lines.*

Annex: Industrial Policy Communication main measures			
	Lever	**Key Action**	**Proposal by the Commission**
Facilitate investment in new technologies and innovation			
1	Priority action lines	Take, in cooperation with industry and Member States, measures for the speedy development of production and markets. -markets for advanced manufacturing technologies for clean production -markets for key enabling technologies -bio-based product markets -sustainable industrial policy, construction and raw materials -clean vehicles -smart grids	Dedicated task forces will be created before the end of 2012 to define roadmaps for each action line.
2	Accompanying measures	Ensure a simplified, predictable and stable regulatory framework for new products and services including the appropriate standards and certification.	Further actions will be taken in the field of standardisation, fostering infrastructures and the digital market in 2013
Access to markets			
3	Improving the Internal Market for goods	Simplification and better governance of the Internal Market legislation making it more stable and predictable. Better protection of citizens from non-compliant products and fair market conditions.	Adopt a Product Safety and Market Surveillance Package by the end of 2012 that would consist of a revised General Product Safety Directive, a new Market Surveillance Regulation and a Communication on a multi-annual action plan for market surveillance for

			2012-15. A roadmap for the reform of the Internal Market for Goods will be defined in 2013
4	Fitness checks	Improve consistency in the implementation and interaction of those policies most important for competitiveness.	Undertake fitness checks of the aluminium and petroleum refining sectors starting before the end of 2012.
5	Entrepreneurship	Improvements to the framework conditions and support measures for entrepreneurship as well as actions to stimulate the uptake of digital technologies and e-commerce.	Propose an Entrepreneurship Action Plan setting out recommendations to Member States. November 2012.
6	Intellectual Property	Consider measures to increase transparency and improve the treatment of IPR in standardisation. Support SMEs to protect and effectively use intellectual property rights in third countries including the ASEAN and Mercosur countries.	New IPR helpdesks will be established and become operational in 2013 to support SMEs.
7	Raw materials	Further develop the "raw materials diplomacy" and promote international regulatory cooperation and convergence, notably vis-à-vis neighbouring countries, in order to accompany the creation of markets for new products and technologies.	Implementation and development of agreements signed in previous missions and new missions starting in November 2012 with Morocco and Tunisia;

Access to finance and capital markets			
8	SMEs	Simplify and reinforce the effectiveness of financial instruments to support innovative activities by SMEs. Improve and diversify access to finance for the real economy.	Additional facilities to increase lending capacity will result from the capital increase of the EIB that will be made available in 2013. Proposals will follow on the basis of the conclusions of the Green paper on the financing of long term investment in the EU expected by end 2012.
9	"Smart specialization"	Member States will be able to make effective use of cohesion and structural funds strengthened by the concept of "smart specialization" to contribute to growth and job creation. In the context of the current programming period of structural funds 2007-2013, they should exploit all opportunities to direct remaining resources towards investment in innovation.	New cohesion policy provisions for 2014-2020 Multiannual Financial Framework and Development of COSME and Horizon 2020 programmes.
The crucial role of human capital			
10	Skills and training	Match skills and jobs by developing a European multilingual classification of Skills, Competences and Occupations.	Creation of the European Sector Skills Councils and of Knowledge and Sectors Skills Alliances and support the development of multi-stakeholders partnerships in the ICT sector to improve the skills shortage in the ICT sector. (2013) Develop EURES into a pan-European placement and recruitment tool. Establish a Quality Framework for Traineeships to encourage companies to offer

			traineeships to young people